homemakers' chat
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U. S. DEPARTMENT OF AGRICULTURE

Wednesday, October 7, 1942

Subject: "HEATING WITH WOOD." Information from wood experts of the U. S. Department of Agriculture.

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Pictures of Abraham Lincoln's boyhood often show him spending a winter evening stretched out before an open wood fire, poring over a book that no doubt helped prepare him for his great career.

This winter, in many a home, in city, town, and country, a cheerful wood fire will be the center of interest for entire families. What could be more cosy on a cold night than the warm glow of a wood fire crackling on the hearth, or flickering through the chinks of a wood stove? Grouped about the living room will be the women of the family, busy with knitting for our men in the armed forces, and rosy-faced school children doing their home work; and the men of the household, resting or reading after a hard day's work on the home front.

When company comes, the children will pop corn or pass around a bowl of nuts or apples. Reports from the boys in training camps or over seas will probably come into the conversation. Perhaps the group will take turns reading aloud, or join in games.

All too soon the children's bedtime rolls around. With squeals and laughter they make a dash for their sleeping quarters in a cooler part of the house. It doesn't take them long to prepare for bed, or to fall asleep even in a cool room after warming up by the open fire. With the rationing of fuel oil, gasoline and rubber tires, the wood fire may bring the family closer together this winter.

A lot of farm families won't need to worry at all about fuel for heating their homes. Fuel shortages don't need to bother them, for they have trees on their land that need cutting and make excellent wood for burning. Crooked, diseased, and dead trees in farm woodlands make fine fuelwood. By removing these trees, the rest of the trees have a better chance to grow into more valuable timber.

On cold mornings a wood fire provides a large volume of heat in short order. Pines make a quick, hot fire but last a shorter time than hardwoods like birch and oak. Oak, birch, and hickory burn more slowly and give a steady heat. Another favorite fuel wood in the northeastern and central regions of the country is American beech. It has a heating value nearly equal to that of the best oaks, say Forest Service experts. Locust, eastern hophornbeam --sometimes called ironwood - and several other hardwoods also yield considerable heat per cord. And red mulberry and hawthorn, though they are small trees, make good fuelwood. For open fires, unless you have a screen, it's best not to burn chestnut, butternut, tamarack, or spruce as these woods throw off sparks.

Moisture in wood is the most important factor influencing the heating value. In burning, any water in the wood has to be driven off as steam, and naturally, the heat required to drive off the moisture does not serve to warm the stove or furnace. So it really is heat wasted.

That's why wood needs to be seasoned for efficient burning. When you season your wood thoroughly before burning it, you dry it out and increase the heating value because about 25 to 45 percent of the weight of green wood is water. In cottonwood and willow it may be as much as 55 to 60 percent.

And drying wood for a short time is much better than not drying it at all. If you stack your green wood so that air can circulate freely about the wood for 3 months in reasonably dry weather, seasoning will be about half done. The fuel value will then amount to about 90 percent of the fuel value of thoroughly

air-dried wood. Homemakers know that dry wood kindles much more readily than wet wood, and in a stove or domestic furnace a fire of dry wood is generally easier to tend and regulate. Seasoned wood has less tendency than green wood to leave creosote in the chimney flue.

To get the most value from stove wood or furnace wood, cut it short enough to lie flat in the fuel chamber. If the firebox is rounded or oval in shape, it's best to have the pieces somewhat shorter than its inside length. If you want a hot fire, pack several sticks closely, side by side, with only narrow air spaces between them. The heat reflected from one to the other helps drive off moisture and holds the proper rate of burning.

It's a good idea, when using wood in a coal furnace, to combine it with coal if possible. Place a layer of good-sized sticks of wood in the firebox; then add a layer of coal, filling most of the crevices between chunks of wood but leaving an open flame burning in at least one place. In this way you can save from 25 to 50 percent of the coal you would normally use, although you will have to refuel a little more often. If you burn only wood, you should use a check damper in the smoke pipe because wood does not need as much chimney draft as coal.

A farmer may want to construct his own wood-burning furnace of brick, using little new metal material except pipes for smoke outlets and air ducts. One or more large oil drums can serve as the firebox, and discarded articles can supply the other parts.

Holding a wood fire overnight requires extra fueling with the largest chunks, preferably of heavy hardwood, and special attention to closing the draft dampers tightly.

If you haven't yet provided for heating your home this winter, better take heed. Whether you plan to use coal or oil you'll be wise to have a supply of cordwood too, so you can burn less coal and oil to help win the war.

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